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THE JOURNAL OF GEOGRAPHY

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The JOURNAL of GEOGRAPHY

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VOLUME XXVI SEPTEMBER, 1927 NUMBER 6

GEOGRAPHY IN THE JUNIOR HIGH SCHOOL

Report of the National Council Committee on High School Geography

I

THE NEW CURRICULUM

An examination of the literature, ever increasing in volume, on the curriculum reveals the fact that there is a new spirit at work in our schools, a spirit that is a response to the many problems growing out of our tremendous industrial development, the rapid growth of urban industrial centers, the increasing utilization and rapid depletion of many of our natural resources, out of the wonderful improvement in transportation and communication, the expansion of our overseas commerce, our increasing participation in international affairs, and the tremendous expansion of our mental horizon.

The schools must ever reflect the trend of the times, for how else can they perform the duties imposed upon them? Modern life is quite different from life in pioneer days when the child was from birth in direct contact with the environment from which he later must attempt to wrest a living and play his part as a citizen. The pioneer's world was a crude farming world, in which local economy prevailed. Economic, social, and political life was simple. School life did not need to imitate the everyday life of the world for the child participated freely in his out-of-school activities in the affairs of his neighborhood. He attended threshings, barn raisings, logging "bees," town meetings, and even business meetings of the church fathers. He was in close touch with practically every phase of community life. The "three R's" then taught might suffice; but now we are living in a world of machines which multiplies man's power many fold. Production, transportation, communication are now almost entirely machine performed. The child of today even in the most favorable environment comes in

contact with only such specialized forms of activity that a highly complex industrial civilization permits. A new type of education is therefore needed. It must be an education that will aid the developing child to understand and participate in the work of the everyday, pulsating world. It must do something more. It must, with specific knowledge—information and sources of information—specific procedures, and successful practice in self-expression and self-sacrifice (the essentials of strength of character in a democracy) educate the child to feel the zest of search and responsibility for choice in the changing civilization. Both the cultural, or avocational, and utilitarian, or vocational aims must therefore be realized thru the course of study.

No subject, unless it can in some measure supply worthwhile elements of the program sketched above, should hope to *claim* a place in the new curriculum.

II

THE "CLAIMS" OF GEOGRAPHY AS A JUNIOR HIGH SCHOOL SUBJECT

That geography as a socialized subject has had its values inexcusably ignored by most of our school can scarcely be denied by any one who takes the trouble to analyze the facts. This mistake must not be perpetuated.—Davis in "Junior High School Education," p. 186.

The study of geography offers a larger and wider opportunity for a vital and comprehensive study of human life in its environmental relations than any school subject established or proposed.—Henry Suzzallo.

Within the last decade or two a new spirit has been at work in shaping the content of elementary and secondary school geography—a spirit of the practical. In all our better schools today the geography curriculum presents usable information that deals with the experiences of men and nations in their economic and political adjustments to their physical environments. Geography today is essentially an interpretative study of:

1. The great industries of continents and regions: agriculture, lumbering, fishing, mining, manufacturing;
2. Of trade and transportation;
3. Of the need and the methods of conservation of our natural resources: waterpower, minerals, forests, soil, and human life and property;
4. Of the ideals, aspirations, and problems of nations;
5. Of the geographic factors at the basis of the international problems of today;

6. Of the political, economic and commercial ties that bind the nations into a world family;

7. And because it is geography—traditionally a study of the earth and man—it discusses each of these in their specific physiographic and climatic setting. It aims at the establishment of principles that underlie these economic and political activities of man and at the development of a geographic "spirit" that utilizes facts and principles in the solution of problems in the field of economic, political, and social geography. It takes first rank as a high school subject in teaching human adjustment to the present day social, economic, political, and international conditions, and in demonstrating the laws of geographic adaptation, i.e., the ultization of the resources of the earth.

Altho geography has a place in the elementary school, its field is so large, its material so valuable and so closely linked with the present everyday changing world, it should have a prominent place in the high school. A. S. Goldsborough, late Executive Secretary of the Baltimore Association of Commerce, has well said:

> The high school graduate cannot get along in the changing—ever changing—business world on the geographic facts learned when he was an elementary school pupil. Geography is a dynamic subject which loses vitality if not kept up to date.

Geography, because it presents interesting up-to-date practical information, offers opportunity for good straight thinking on problems of effective citizenry. Because it deals with natural resources and their conservation, because it reveals our potentialities as an agricultural nation, as a manufacturing nation, and as a world power, and because it interprets the economic activities and opportunities of the various sections of our country, it should be accorded an important place in Americanization work. The vast majority of immigrants seek America because of economic motives. Why not point them to some of our potentialities and accomplishments thru the avenue of Economic Geography? Other aspects of geography, i.e., social, regional, physical, mathematical, will function in classifying the analyses stimulated by the economic theme.

It is recognized by all educators that the learning process is largely a matter of sensing experiences. Units of study in modern pedagogy are units of experience. The best teaching demands the active participation of the child in the solving of real or vicarious problems and projects.

In progressive schools today the better type of teaching—problems, problem solving, dramatization, socialized discussion—are to be found in geography classes in both the elementary and secondary schools. Geography, because it simulates real life, lends itself to all modern methods of instruction. It is an excellent medium for the establishment of correct habits of thinking and the development of intellectual honesty, more desirable by far than the acquiring of facts of any sort. Geography expands the mental horizon, deepens the sympathies by revealing the relation of one's work to the remainder of the social process, develops intellectual hunger, stimulates the imagination, broadens the general understanding, creates many-sided interests in direct and vicarious experiences, and encourages co-operation with the whole.

GEOGRAPHY AS A "CORE" SUBJECT

Geography has long been recognized as a synthetic subject because of its intimate relation to the social, biological, and physical sciences. It is rooted in so wide a variety of interests that its facts and principles may be used as the "core" in the solution of many of the vicarious problems and in the organization of studies that deal with industries, trade and transportation, and international affairs. It offers a logical, usable, well established, easily comprehended scheme of organization of the material dealing with human activities in the fields listed above and in many others. Lack of balanced organization is one of the shortcomings of much of the teaching in the composite courses in social studies.

III

OBJECTIVES IN JUNIOR HIGH SCHOOL GEOGRAPHY

Grouping objectives under Knowledge, Habits, and Appreciation is for the convenience of adult analysis of the teaching-learning process. As the pupils experience the geography course, however, they will not attain those objectives in isolation, one from another. As they acquire knowledge, they will be receiving training in desirable habits of work and will be developing an appreciation (emotionalized insight) of life's values. "Knowledge Objectives" are listed first only because they furnish raw material out of which the habits and appreciations are built.

Knowledge Objectives

1. Knowledge of the economic activities of the pupil's own community and his country at large
2. A knowledge of the major economic activities of the various peoples of the world, stressing the relations of the work of the individual to the world's work, thus dignifying work and assisting the child in his choice of a life career by helping him to find his own personal interests
3. Knowledge of the immense potentialities of our country and of the numerous opportunities which it offers for vigorous, thoughtful men and women
4. Knowledge of the extent and ways in which environment promotes well being
5. Knowledge of the nations of the world, of their interdependence and of the *necessity* of their living together as a world family
6. Knowledge of world happenings
7. Knowledge of the specific usefulness of the various maps employed in school work, home, public libraries and the business world
8. Knowledge of the sources of first hand geographic data, with specific usefulness of each type, and of the important centers conducting geographic investigation, exploration, and publication

Habits

1. The habit of "sizing up" situations with an interest in discovering their geographic aspect
2. The habit of using geographic tools, such as books of reference, pictures, grafs, verbal material, specimens, in seeking information on the topic at hand, and to develop the ability to assemble data, weigh facts, draw conclusions, and express opinions
3. The habit of applying geographic principles whenever practicable, in the interpretation of problems and events of current interest
4. The habit of suspended judgment
5. The habit of reading geographic literature in leisure time

Appreciations

1. An appreciation of the fact that we are living in an age characterized by rapid changes in man's relation to his physical environment, to society, to the state, and to the world

2. Sympathetic appreciation of the elements of the physical environment which help to explain the work and play activities of man in specific environments

3. An appreciation of the fact that in a country as large as ours with problems peculiar to sections playing a large part in national politics, a spirit of tolerance is essential to state and national stability

4. An appreciation of how the physical environment necessitates the interdependence of people and nations as man's wants become more numerous

5. An appreciation of the way in which the physical environment may handicap or significantly encourage a country to take its place in world affairs

6. An appreciation of the interest geography gives to one's reading

7. An appreciation of our resources and potentialities in comparison with those of other nations, of our accomplishments with theirs, of our economic and social conditions with theirs

8. An appreciation of the great need of the conservation of our natural resources, and our co-operation with other nations in establishing a world conservation policy

9. An appreciation of the value of good government as a factor in the utilization of the resources of an environment

10. An appreciation of the obligations the United States as a world power and a member of the great family of nations has to all peoples

11. An appreciation of the great value of geography in making travel interesting and profitable

IV

THE JUNIOR HIGH SCHOOL CURRICULUM

The committee recommends two years of geography in the junior high school as the minimum to carry out the objective listed above. We suggest two major fields of study for these two years of work as here listed under A and B.

A. Resources and Industries of the United States and Their World Relations

This group of topics is intended to give an understanding of the varied natural environments of the United States, the human ad-

justments to each, and need of adjustment as the population increases. The beginning of an understanding of geographic laws and principles should come about as a natural result of the study and interests and activities of man in these environments. This unit should also develop an appreciation of the interdependence of peoples within a national group, and an appreciation of the interdependence of nations thru a knowledge of the social and trade relations of the United States and the rest of the world.

B. The Interdependence of Nations and Regions

The purpose of the geography work in the second year is to assist the junior high school child to investigate the relation between life and the natural environment in the various regions and countries of the earth in order that he may come to see that man's economic activities are largely adjusted to the physical conditions and that nature affects the interdependence of nations and regions.

This two year curriculum may be simplified to fit into the second cycle of the "Eight-four Plan."

Some Suggestions to the Curriculum Maker as to the Content and Method of Junior High School Geography

In working over the various units of study listed below, one should include only such material as is concrete and definite and of such nature that the pupils can recognize its worth. The material must be genuine and up-to-date. It should possess strong child interest.

One should endeavor to select such material and organize and teach it in such a way as to give the pupils the conscious thought that they are meeting with real and generally new experiences. The emphasis on junior high school geography should be rightly on the exploratory, vocational, cultural, and citizenship training values. One should make no attempt at an exhaustive study of one topic, but should treat each topic with sufficient fullness so that there will be left in the child's mind lasting impressions.

One should provide for the free use of all known "supplementary" and "dynamic activities," such as field excursions, individual investigations, group reports, interview with authorities, laboratory studies, and current events.

The boundaries imposed by "subjects" should not be permitted to hamper unnecessarily the teacher and pupils in following out a lead and developing associations and natural relationships.

V

A SUGGESTED LIST OF TOPICS

The committee believes it advisable to present a tentative list of topics that school administrators can better understand the value of the curriculum suggested. It is not the idea of the committee to recommend a nationally approved list of topics, merely to present samples of the types of units of study that may be used to realize the objectives listed.

A. Resources and Industries of the United States and Their World Relations

In so far as possible each unit should be based on local industries as offering concrete, accessible types.

1. The Wide Variety and Wealth of our Resources
   - Rank among nations in a few products as types
   - Per capita wealth of nations
   - Importance of resources
   - The inventive genius and working efficiency of Americans
   - Our rank among nations
2. The Physical Basis of our Wealth and Power
   - Large area—its effects
   - Wide extent of usable land
   - Favorable and stimulating climate
   - Fuels and other minerals
   - Natural transportation facilities
   - Location for foreign commerce
3. The Distribution of Population in the United States
   - Part played by geography in the movement of frontiers
4. Transportation in the United States
   - A century of improvements in transportation
     - From trail to railroad and auto track
     - Canoe to ocean liner and tramp steamer
     - The conquest of the air.
5. Our Ability to Produce and Distribute Foods
   - Geographic factors in the production of foods
   - The movement of foods to markets
6. United States as a Manufacturing Nation
   - From handwork to machine
   - Use of tools, implements, and machines

7. Sources and Uses of Power
   Man, animal, fuels, wind and water
8. The Iron and Steel Industry
   Mining
   Metal manufactures
9. Our Ability to Clothe Ourselves
10. Our Forest Resources
    The lumber, woodworking and paper industries
    Conservation of forests
11. Building Materials and their Production
12. Commerce of the United States
    The chief railway systems
    Our use of the waterways
    Coastwise traffic
    Some of the more important ports of our country
13. Our Independence of and Dependence upon other Nations, largely a review

Suggestions for Interpreting Above Topics

1. The topics in this section are not to be considered in detail; they are to serve rather as an introduction to the course. They are intended to motivate the pupils in their choice of problems. Grafs which portray relative rank among nations are to be preferred to the study of exact figures.

2. These topics also are to be considered in a broad and general sense; they must serve to give the pupils a background of the country as a whole, upon which further topics may be elaborated.

3. Study of population maps will introduce the problem "Why do many people live so close together here and so far apart in other places?" The solution of this problem will involve the consideration of living conditions in mountains, deserts, etc. Causes of fluctuation in population are involved.

The study of population maps of 1790, 1850, etc., will show the spread of population westward. The influence of passes and natural waterways will explain the movement of the frontier and the directions of the movements. The influence of discoveries, inventions, in opening up new territories, must be considered.

4. Transportation of commodities across the United States is not to be considered here, because centers of production and markets have not yet been definitely located. The emphasis is to be

placed rather upon modern means of transportation by land, water and air. Brief historical sketches of the growth of these means should be introduced. A more detailed study of specific centers and routes of trade is deferred until section 12 of this course.

5. This topic calls for a study of the production of certain important food crops, as fruits, wheat, etc., as well as fish and cattle, the choice of which is left to the discretion of the individual teacher. The influences of such geographic features as surface, soil, climate, etc., upon the production of the product is to be considered, as well as man's adaptation to the environmental factors such as irrigation, drainage, etc., which make possible increased production, and production under unfavorable conditions. Specific routes of trade between the producer and consumer in dense population centers are to be studied.

6. Grafs and charts will show the present importance of the United States as a manufacturing nation, centers of dense population being also manufacturing centers. Present day machinery, such as looms, the cotton gin, farm implements, the work of necessity and genius should be studied. Pupils should be led to appreciate the comforts over older hard methods, which have been brought about thru these inventions. Since the teacher is at liberty to choose his topics according to individual need, or child interest, it is suggested that perhaps this topic might be more profitably deferred until later, when all the elements necessary to a manufacturing community have been studied, these elements being: presence or accessibility of raw materials, ready market, power, labor, means of communication with market and with fertile hinterland.

7. Topic 7 involves a study of the means by which work can be done in the United States. Foremost is man power, and without delving too deeply into the realms of sociology and economics, pupils should realize and appreciate the initiative, energy and creative genius of Americans, and the influence of climate upon these characteristics, encouraging or discouraging as it does, certain types of immigrants. Animal power in certain agricultural and forest regions should be noted as a natural adjustment to geographic conditions. Wind mills of the prairies, the recently invented rotorship, the importance of wood as a fuel in certain sections, then the great stores of water power among our mountains, our gas, coal and oil resources should also be studied.

8. The centers of iron production and the comparative value of the iron mines of the United States and other countries should be studied and drilled thru the use of maps and grafs. Processes of iron mining, its dependence upon coal mining, the manufacturing processes and centers of steel and machinery manufacturing, should receive only brief consideration. A study of social conditions among miners in mountain sections will lead to a sympathy with these laborers and an understanding of their problems.

9. This topic should be treated in a way similar to topic 5. Manufacturing and routes of trade can be more fully treated here, however, because of the accumulated background.

10. Forest areas of the United States and the principal types of trees should be located in the United States. The dependence of forest growth upon surface and climate should be stressed, as well as different ways of lumbering for different sections of our country. Hardwoods, naval stores, paper pulp, nursery plants, dye woods should all be stressed as forest products. The belief in the necessity of farming tree crops rather than in mining forests should be inculcated. The necessity of forest conservation as a means of influencing our climate and preserving our soils should be indelibly impressed. Pupils should feel it their patriotic duty to transmit their forests "not only not less, but greater, better and more beautiful than they were transmitted to them." Foreign markets for United States lumber and large lumber ports should be included.

11. Areas of building stone production should be studied, using maps. Methods of quarrying, use of various stones in building should also be used. This topic includes also such manufactured materials as brick, concrete, pottery and glass.

12. Having studied the resources and industries of the United States, this consideration of the means of transporting raw and manufactured material comes more as a summary and application of what has been previously studied. Note that topic 4 deals with general means of transportation and with historical changes in method, whereas topic 12 deals with actual commercial facilities as they exist today in our country.

13. At the conclusion of the course, the teacher should be able to judge of the child's appreciation of our great and necessary dependence upon other nations for a market for our goods, and for a source of raw materials as well as their dependence upon us.

A knowledge of facts alone will not suffice; understanding and appreciation of world interdependence must have been inculcated. Specific cases should be stressed and cited. The child should feel the same appreciation toward different sections of our country and toward all people engaged in different industries.

B. The Interdependence of Nations and Regions

1. Many Lands Supply Our Needs (Products used in our community)
   Why there is commerce
   Magnitude of present day commerce
   Major products of commerce
2. Studies of a Few Typical Products of Commerce
   Production (primary and secondary) and movement of rubber, sugar, leather, vegetables, oil and railroad equipment
3. World Commerce
   Products of modern commerce
   Commodities and traffic routes of the past
   Traffic routes of today
4. The Machinery of Commerce—Transportation and Communication
   Human portage and pack animals
   Evolution of ships
   Railroads, distribution as to continents and countries, their efficiency
   Work of consular service
   Postal, cable and wireless service
   Coaling stations
   Government aids to navigation
   New York as a modern port and its equipment
5. Type Regions and Countries
   Great Britain (and Northern Ireland) as a modern manufacturing and commercial nations
   Basis of manufactures—coal, iron, density of population, source of raw products, capital
   Story of the growth of manufactures

Textile industries, iron and steel, machinery, ship-building
Agricultural conditions at home
Commerce in foods and raw products
Britain's investments in opening undeveloped regions
British Dominions and Colonies—interrelationships
London as an entrepot port
Position of coal in foreign trade
Relation of navy to commerce
How war disturbs British industry and trade
Russia—an agricultural country of the temperate zone
The Philippines—tropical lands, how used by man
Persia—Land of little rain
Amazon Basin and Arctic Lands—regions of little commerce and development
India—An old, densely populated and retarded country

6. A Study of Selected Regions and Countries

The following list of regions and countries should be considered as the maximum

Canada—Our Northern Neighbor
Mexico and the Caribbean Lands
The Andean Countries
The Temperate (intermediate) Zone Countries of South America
The Coffee Region of Brazil
France and Belgium
The Scandinavian Countries
The Western Mediterranean Lands
The Balkans
Central Europe
Undeveloped Siberia
Southwest Asia
China and Manchuria
Japan

The suggestions following part A are, in the main, applicable also to B. From these the teachers should have gained sufficient ideas of the purpose of these topics to enable them to work out their own problems.

COMMITTEE OF THE NATIONAL COUNCIL OF GEOGRAPHY TEACHERS
(Appointed by Board of Directors, Madison Meeting, 1925)

ANGELA BROENING
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George Peabody College for Teachers, Nashville, Tennessee

The Southern Council of Geography Teachers at a conference held at George Peabody College for Teachers, April 1 and 2, 1927, endorsed in full the report of the committee of the National Council set forth in the preceding pages.

A. E. Parkins, *President for 1927*
L. G. Kennamer, *Secretary*

A SURVEY OF THE SILK INDUSTRY

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INTRODUCTION

Silk, the filament derived from the cocoon of the silk worm, is the most valuable product that comes out of the Orient. Altho it was an Empress of China who 4,000 years ago found that this filament could be woven into a textile, it was Italy and France who for several centuries supplied the world with the lovely fabric.

Silk is the strongest fiber known—the only fiber that is proof against decay caused by dampness. It is elastic and durable, with a high natural luster, and great absorptive power which enables it to take dye well. But the human labor involved in the production of a single silk garment explains why most of the world's raw silk is produced in the Orient—the lands of starvation, low wages —and why its production has never been successful in the United States, the land of highest wages. As a consumer, the United

States leads the world. We annually spend as much for silk as for public education, and thirty times as much as we spend for foreign missions.

This then is the explanation of the great interest taken and money spent by the Silk Association of America to improve the quality and increase the quantity of the output from the Orient. When in 1864 France and Italy and the Near East almost lost the industry of sericulture thru devastating diseases of the worm, it was Japan who supplied them with millions of eggs. But these countries had to learn thru Pasteur's investigations over a period of two or three years how to produce, by isolation and microscopic examination of the egg-laying moth, eggs that are free from disease.

SILK CULTURE IN CHINA

This method of insuring healthy worms in isolation of the moth and her eggs until after microscopic examination has been introduced into Japan and China. Japan, quicker to receive new ideas and readier to imitate the ways of the Occident, has so profited by the teaching that it is now producing more raw silk for export than all the rest of the world together. China however, whose people are held down by centuries of superstition and by distrust of the foreigner and his ideas is accepting the new methods very slowly. The Canton Christian College and the Nanking University in conjunction with the Silk Association of America have built sericultural houses for training all who come to them to produce disease-free eggs and worms. They also distribute eggs and mulberry plantings among the farmers. Lecturers have gone out from the Shanghai International Testing House established by the Silk Association of America in conjunction with Chinese stock holders, and by means of moving pictures and interpreters have demonstrated to the people the best way of producing silk. But the Chinese farmer must be convinced that the eggs so produced are the best before he will even accept them gratis.

The best silk from China comes out of the Central Provinces by way of Shanghai, from the univoltine or annual worm crop. From South China thru the port of Canton comes the multivoltine, or many-crops-in-a-season. This is softer and poorer in quality. From the North, by way of Chefoo, comes chiefly the tussah, or wild silk made by the worm that feeds on the leaf of the oak tree.

This is the pongee of commerce—less even in reeling, of a "natural" or linen color, and less easy to dye because the coloring matter is in the fiber and not in the gum. This gum is a part of the filament that is exuded from the two tiny apertures of the worm. It glues together the two filaments as they come into the outer air, and must be removed from the fiber by a "boil-off" in soap and distilled water. One species of the cultivated, or mulberry worm, produces a yellow cocoon, but the fiber comes from the "boil-off" pure white because the color was in the gum.

American silk men and educators in China have another aim—to teach the filature owners that their output will be more acceptable to American manufacturers and the profits great, if they

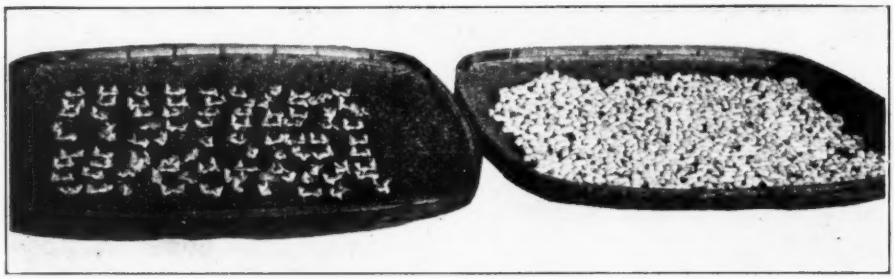

FIGURE 1. Cocoons containing moths are shown in the tray on the right and the mating of moths immediately after emerging from the cocoons is shown on the left.

will keep the filatures cleaner, and cease to employ little children for the reeling. Both practices cause a great waste, as much silk is too soiled for sale, and the little untrained fingers break the delicate threads, and do not join the breaks skillfully.

The problem of proper buying methods also deserves the close study and attention of those interested in improving the silk industry in Central China. Sometimes the filature sends its own men to supervise the buying and drying of cocoons, sometimes it makes the owner of the cocoon "hongs" its agents.

The farmers come with their baskets of fresh cocoons, and the buying period lasts only from two to seven days, a very short and hurried transaction. This hurried way of buying cocoons is partly responsible for the poor quality, because there is not enough time for careful selection and examination.

The filature men and cocoon merchants of Shanghai have formed a guild for the purpose of promoting their interests in

dealing with other organizations such as the Government Tax Bureau, The Foreign Silk Association of Shanghai, etc. It has branches in all of the important cocoon districts where meetings are held at the beginning of the cocoon season to decide the date of opening the market and the price to be paid for cocoons. Perhaps the most important work of the Guild is the negotiations with the provincial authorities in fixing taxes on cocoons and in changing the regulations in cocoon buying. In cooperation with

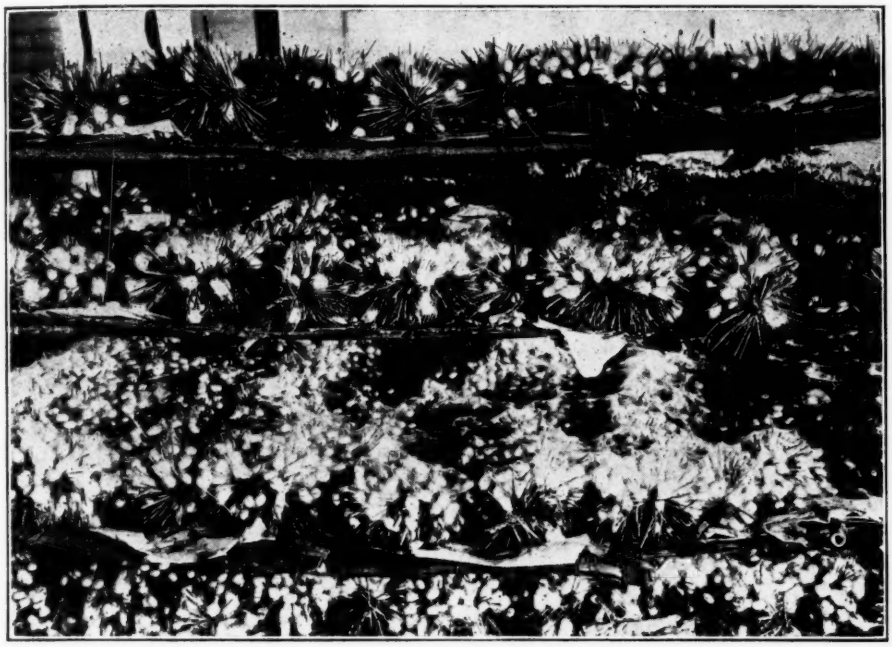

FIGURE 2. Cocoons being produced at the University of Nanking for improved seed, in the sericultural building presented by the Silk Association of America as an encouragement to the silk improvement work which the University is doing.

the Foreign Silk Association of Shanghai, they have established standard methods for buying and selling of China silks and have assisted in organizing the International Committee for the Improvement of Sericulture in China.

Raw silk is sold to the foreign raw silk exporters thru the Chinese silk brokers. These men go from one exporter to another to give the trend of the market and to bargain for the best price for the sale of raw silk at their disposal. They exert a strong influence over the raw silk markets of China. Practically all the

silk shipped is by foreign exporters who act as agents for their various customers in America, Asia, Europe and Africa.

In 1924, China silk was purchased as follows:[1]

America 39%
Europe 45%
All others 16%

The quantity of raw silk purchased by the United States from China was 4,680,779 pounds, at an average cost of $6.38 per pound.[2]

SILK CULTURE IN JAPAN

It has been roughly estimated that one-half of the world's raw silk is produced in Japan, one-third in China, one-tenth in Italy, and the balance in France, the Near East, India, Spain and the Balkans. Japan exports 65 per cent of its production, sending 90 per cent of this amount to the United States. The whole of Japan proper produces silk, but the industry flourishes chiefly in the center of the country. In the last four years for which figures are available, the number of farming families keeping silk worms has risen by half a million, showing that new ways of increasing income are eagerly seized upon.

Much has been done in recent years to improve the output with encouragement and protection from the Imperial court and government. Tremendous subsidies are given for mulberry planting. Laws have been passed forbidding the export of inferior silks. The Imperial Japanese Sericultural Experiment Station, established in 1911 in the suburbs of Tokyo, is a model establishment and as perfect in its teachings as the best agricultural experiment stations in the United States. Instructors are sent out, libraries have been established, and laboratory investigations are made. Japan has adopted much more scientific methods of treating the worms than its neighbor China, partly driven to it by cold and changeful climate. Most of the sericulturists raise three crops a year.

The Japanese silk reelers show an earnest desire to improve their product and make it meet the requirements of their customers. Some of their failure to make best use of testing results lies

[1] Survey of the Silk Industry of Central China (Nov. 1925). Shanghai International Testing House, Shanghai, China.

[2] *The Silkworm*, Silk Association of America, N. Y.

at the door of American manufacturers who fail to furnish definite information in explicit internationally standardized terms. The working conditions in the filatures leave much to be desired. The hours are very long—almost from daylight to dark, the wages are low, and the sanitary and moral conditions are deplorable. But the white raw silk of Japan is the finest in the world.

It might be said that silk holds the balance of Japan's foreign trade, since it is the chief export, and since it creates a gold surplus

FIGURE 3. Silk reeling in native houses outside the city of Nanking. This is the method used in general in the production of the Tsatlee silks.

in New York. This surplus is taken care of by exchange on London thru food and raw materials sent to England by the United States, and manufactured articles sent by England to Japan. The chief export ports are Yokohama and Kobe, and the outgo is greatest between June and October. The price of raw silk is regulated largely by the condition of the consuming market in the United States, and therefore prosperity—much of it—in Japan is said to be contingent upon the ability of the American market to consume at an average price of $5.73 per pound.[3]

As silk is a high class cargo, there is much competition for it among European, American, and Japanese ships. The Japanese

[3] Ibid.

have constructed fast liners for the trans-Pacific run. There is no cargo in commerce that is rushed from its port of departure to its destination as is raw silk, owing to its high value. Record runs are made across the Pacific to Seattle, where a fast train waits at the dock. All other rail traffic gives way to these trains which make the shortest transcontinental time to New York on record.

Both Japan and China send quantities of silk "waste"—pierced cocoons and short ends from reeling—as well as fabrics and manufactured articles— to the United States, Great Britain, Australia, and British India. As an illustration of this, 987,349 dozen of silk handkerchiefs, 37,169,080 yards of pongees and fuji silks, 17,956 shawls, and 186,645 yards of chiffon, were exported from Japan in 1924.[4]

Silk Culture in India and Indo-China

England has spent large sums of money to establish sericulture on a paying basis in India. But the demand for the tassar or tussah cocoons is far ahead of the supply, and the cultivation of the mulberry worm has greatly declined owing to: (1) competition with Italy, China, and Japan; (2) disease and defective reeling; and (3) introduction of more profitable crops. In Indo-China the annual production of raw silk is estimated at 2,400,000 pounds. Land planted to mulberry trees is exempted from tax for five years, but many regions adapted to the silk worm are not yet used.

Italy and France

Silk culture in France is today at a stand still. In spite of government bounties it is obliged to buy much of its raw silk from Italy, Japan, and China. This seems odd since it was Pasteur's work in saving the silk industry from extermination in his own country that laid the basis for modern sericulture thruout the world. Lyons is the greatest silk center of Europe, and French broad silks, velvets, and ribbons have long held the highest place in its manufactures.

The commerce reports from Italy for 1924 record an increase over 1923 of 7,500,000 kilos of cocoons. The recognized commercial importance of this crop has brought it into increased favor with Italian farmers. The production and manufacture of silk is therefore the chief source of wealth, altho the manufactures are

[4] Dept. of Finance, Foreign Trade of the Empire of Japan, compiled by Silk Association of America, N. Y.

not of superior quality. Experimental stations for the production of healthy eggs have been established. Lombardy is the richest silk province.

OTHER COUNTRIES

In the Near East, Persia, Turkey, and Syria are awakening from a long period of inaction and a new spirit of progress is stirring the people to introduce factories and steam power and to produce a higher quality of silk. The government of Hungary inspects, advises, educates, and permits only the best certified eggs. They have thus built up a reputation for brilliant, elastic, and

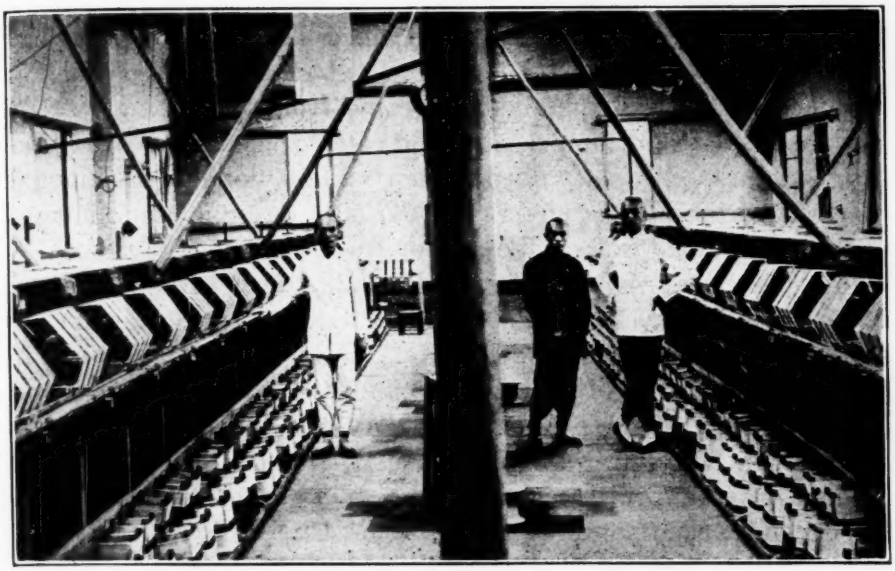

FIGURE 4. Rereeling department in a modern filature in China, showing transfer of raw silk from small reels on which it was reeled from cocoons. The large reels make the standard size skeins for export.

flexible silk. In 1922 Germany established a sericulture school at Leipzig and aims at producing all its own silk. Spain produces worms for little else than the gut which is made from the filament just before the worm is ready to spin.

In Latin America a representative from the Silk Association of America found that Chile had produced a few kilos yearly for ten years and that Argentina has suitable climatic conditions and mulberry trees had been planted, but the supply of labor is too scarce. Brazil, however, has an excellent start with sericultural buildings, a government bonus for eggs, for raw silk, and for plant-

ing mulberries; and mills, with Italian capital and Swiss or German machinery, that turns out ribbons, silks of various sorts, and hose.

MARKETING OF SILK

The great American market for raw silk is New York. There in the space of a few blocks all the big silk firms have their offices and show-rooms. There the United States Testing Company, 95 per cent of whose laboratory tests are silk, has its work rooms and its great warehouse. In this fireproof house are stored the tested and certified bales belonging to the manufacturers. These bales have been brought in "Silk Specials" with right of way from coast to coast even over passenger trains. The most recent shipment (January 14, 1926) was the largest single transcontinental shipment of silk ever handled. It came from Yokohama to New York in 15 days and comprised 10,000 bales packed in 22 passenger baggage cars. It was valued at ten million dollars, an amount which piled up interest charges of $1,650 a day and thus induced the brokers to pay excess charges for speedy delivery.[5]

The American markets for "waste silk" are Hartford (first), Boston (second), New London, Winsted, South Manchester in Connecticut and Pittsfield, Northampton, Holyoke, and Florence in Massachusetts, at all of which large quantities of spun silk are produced. The most important reeled silk manufacturing center is Paterson in New Jersey. Others are in the hard coal district of Pennsylvania and in the State of New York where suitable labor and cheap transportation from New York City can be obtained.

The Silk Association of America, comprising all the prominent brokers, dyers, commission agents, importers, throwsters, and manufacturers of all types of silk goods, issues a monthly publication, *The Silkworm,* giving imports, deliveries to American mills, stocks in New York warehouses, production, and consumption. A recent number shows the demand in the United States for silk goods to be $2.50 per capita yearly.

The United States has outstripped France since 1905 in the manufacture of silks. American mills excel where automatic, high speed machinery, and large scale production can be used; but where cheap or very highly skilled labor is needed, we must look abroad to older silk-manufacturing nations.

[5] *The Evening Star,* Jan. 14, 1926, Washington, D. C.

RAYON

The high price of silk and increasing demand for it have brought about the invention of a vegetable substitute called at first "artificial" or "fiber" silk, but now recognized as a new and individual fiber. It is manufactured in large quantities in France, its birthplace, in England, Germany, Italy, and in America. Its source is cellulose from wood pulp or cotton linters.

It competes with real or silkworm silk in the manufacture of hosiery, broad silks, sweaters, scarfs, ties, and dresses. Many of the most beautiful and striking of the brocaded velvet effects are produced by the use of rayon velvet designs on plain grounds of real silk. The following figures show the production and its great increase as reported by manufacturers in the United States:

1919	8,000,000 lbs.
1921	15,000,000 lbs.
1923	16,526,700 lbs.

It is recognized by the silk trade, used by it in huge quantities, and its output is recorded monthly in *The Silkworm*. The estimated world production for 1923 was 97,000,000 pounds.

It is significant also to note the comparative world's production for 1923 of the four chief fibers:

Cotton	9,000,000,000 lbs.
Wool	2,600,000,000 lbs.
Rayon	97,000,000 lbs.
Silk	87,000,000 lbs.

CONCLUSION

In conclusion 4 points should be emphasized:

1. The world population is increasing rapidly and animals are decreasing in proportion. This means a continued decline in wool, and an augmented demand and production of other fibers.

2. The prospects are most favorable for a great increase in raw silk production in Eastern and Southern Asia, in the Near East, and in large areas in South America. As the Oriental peoples accept instruction in disease-free eggs and modern filatures are introduced in all these countries, the production will meet the demand. High prices are an encouragement to the industry.

3. As rayon depends on spruce and other woods, or on cotton linters, and forestry comes to be universally practised, the supply of this also will be adequate.

4. Although the United States already outranks other nations in the manufacture of silk, the field is large, and increased demand means increased factories.

THE SCHOOL NEIGHBORHOOD

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Upper Montclair, New Jersey

The subject of geography is so vast, complex and rapidly changing that we cannot expect to come to an absolute agreement as to minimum essentials to be taught. There is no other subject whose standards of achievement as set up by different curriculum makers differ so widely; but the most hopeful thing in the situation with regard to geography today is the activity of the curriculum and textbook makers.

For those whose activity lies mainly in the class room, I think we shall all agree that our main efforts should be centered, first, on fostering such an abiding interest in the subject that our pupils will always remain students of geography; and second, on giving them the power to proceed independently in their search for truth. Much has been written lately regarding the so called project method. Reference 2, at the end of this paper, gives two pages of bibliography on the project method as used in geography. In its best application, this movement has helped tremendously in stimulating a lasting interest in the subject, but "There is today a deplorable tendency in geography, as in other subjects, to teach what is merely interesting, whether or not it is valuable. Since almost any principle can be made interesting by a choice of right aids to instruction, the perversion of geography teaching by emphasis, for example, upon details of costume or complex manufacturing processes is unpardonable." (Reference 1, page 24.) In our devotion to a thing we vaguely call project work students are going out of school without the ability to interpret a map, to read intelligently an article in a current newspaper or magazine,

or to gain ideas from anything less spectacular than a moving picture.

There is a term which was much in use in normal schools twenty years ago which I believe should be revived, for a label is often of use for advertising purposes. This term is apperception. If in planning individual lessons or courses of study we were to pay more attention to the gradual upbuilding of a stock of concrete experiences to which the child is trained to relate his later reading, we should be moving in the right direction.

I hope we shall never go back to the type of work in vogue when Frye wrote his valuable book, "Child and Nature," (Reference 5) when the schools all attempted to put into the primary grades a course in pure physical geography calculated to deaden the interest of ordinary children taught by the average teacher. We should, however, as teachers of geography, take careful stock of the material in our own neighborhood which may be used to interpret the meaning of terms and symbols used with children. It is the purpose of this paper to suggest a few of the ways in which children's experiences may be used as an apperceptive basis for geography in the elementary school.

DIRECTION STUDY

The terms east, west, north and south are freely used before the child has any real idea of their meaning. The first opportunity for intelligent use of these terms may arise in the placing of the new geranium in the window where it will grow best during the winter. The children should notice into which window the sun shines in the morning, at noon and in the afternoon. The name south should be given to the window into which the noon sun shines. Here will be the best place for our plant. The children should discover that the sun does not shine at all into the north window during the winter and that only plants like ferns which do well in shady places will thrive there. This knowledge can be related to the home. Children may lay out, with blocks on their desks or the school room floor, plans of their homes and show in what windows the geranium plants will grow best—where the warm sun parlor is, etc. A north-south line should be chalked out on the school-room floor and children should be trained to give intelligent directions for reaching near-by places, as "It is two

blocks south of here," etc. For further suggestions as to teaching directions see Reference 6, page 64.

MAP READING

A map of the town drawn to a large scale should be in every third grade class room. Children should be taught to orient it with reference to a north-south line drawn on the school room floor, and also by reference to two known points. They should be encouraged to enter on this map, by symbols: the schoolhouse, the nearby park, important industrial plants and any other facts they may think interesting. When individual maps can be secured interest may be aroused by letting children decide for themselves what they shall enter on their maps and by seeing which child can direct visitors, in the most intelligent and interesting way, to parts of the town they may wish to visit.

MAP SCALE

Drawing of floor plans of the school room to scale is not often worth while. In the first place the child has no motive for doing it save to please the teacher. He is not acting as a social individual by contributing something that he knows to the solution of a group problem; and the difficulty of the mathematical process is usually beyond the ability of the child. Those who believe that this type of work is worth the time spent on it, will find detailed suggestions in the Detroit Course of Study for Social Science, Grades I to VI. We believe that the time may be better spent in teaching children to interpret maps.

Some child who has a cyclometer on his bicycle or whose parents have an odometer on their automobile may tell his class of a place a mile away from the school. A large scale map of the district may be presented and the children may be given cardboard scales with the miles marked on them. They may learn to use these scales on the maps and discover that the maps tell the same story as the cyclometer. They may report on trips taken with the family over the week end and measure the distance on road maps kept in the school.

Much of the value of this work will have been lost, however, unless it is applied later in the solution of such problems as finding some town as far from Montclair as the Germans were from Paris at the time when Joffre said, "They shall not pass"; or in judg-

ing the probable truth of a statement that it is 50 miles to New York or 500 miles to San Francisco.

CLIMATE

It was Mark Twain who said: "We have no climate, only samples of weather." Unfortunately the samples are not always matched up with the piece goods. In reference 7, pages 62, 64 and 111, are excellent suggestions for games and plays emphasizing the connection between height of sun and temperature in lands from the equator to the pole; but, if the child has never estimated the height of the sun at noon in his own town and observed that as the sun gets higher the weather gets warmer, these games will be meaningless. The observation may be motivated by Stevenson's "I have a little shadow." A child may watch to see if there is any time in the day when, standing in the sun, his "shadow grows so little that there's none of it at all." By measuring the length of his shadow in the morning, at noon, and in the afternoon, he will find that the noon shadow is the shortest. He may play Peter Pan and let another child draw and cut out his shadow from paper or cloth and then find if his shadow fits the pattern when he comes back to Wendy's house and finds it in the bureau drawer. He should discover that as summer comes on his noon shadow grows shorter, and that with the higher sun and shorter shadow the days grow warmer.

Descriptions of temperature conditions in the Arctic summer from Mrs. Peary's "The Snow Baby," or Stefansson's "The Friendly Arctic," should be related to summer temperature conditions here. The length of day in the Arctic should be compared with the length of day here to make the descriptions meaningful.

Children living or visiting in rural communities should be encouraged to keep diaries telling the dates of ploughing, planting and harvesting of crops, and of ripening of fruits. They should refer to these diaries to find why strawberries can be grown within the Artic Circle while melons cannot, why wheat is raised farther north than corn, etc. If they plant cotton seeds in their gardens and find that the plants grow well during the summer, but are killed by frost before the first bolls open, they will be convinced that the length of the growing season is the most important factor in limiting the northward extension of the cotton belt.

SURFACE FEATURES AND DRAINAGE LINES IN RELATION TO THE DISTRIBUTION OF POPULATION AND INDUSTRY

Our thinly populated uplands of Northern Jersey are more frequently seen, tho less frequently discussed in geography classes, than the uplands of New England or Norway. Terraced vineyards like those of the Rhine Valley may be seen on the slopes of the Watchung Mountains, not half a mile north of the Montclair Normal School. Marsh lands are reclaimed in New Jersey as well as in Holland. The sandy plain of South Jersey is naturally much like that of North Germany bordering the Baltic, but we have had no Kaiser to encourage the cultivation of our pine barrens by bonuses and commands. The gap cut by the Passaic River thru the Watchung Mountains has determined the course of the Morris Canal, the Lackawanna and Susquehanna Railroads and the growth of Paterson, as much as the Hudson Mohawk Gap has determined the route of the Barge Canal, the New York Central Railroad and the growth of Albany and New York City.

While studying the Nile Valley in its relation to Ancient Egyptian Civilization, the importance of its flood plain is continually emphasized. The interest in this study should prompt a visit to the nearest brook to find out if it too has a flood plain, and whether the soil on this flood plain is any different from that of the part of the valley which is not flooded. If you are fortunate, as I have been, in finding a truck farm occupying a small flood plain, the children will enjoy bringing back to school samples of the soil of the flood plain, and building on the sand table a reproduction of the truck farm. They will be interested to find that some of the products raised on that farm are raised as winter crops on the flood plain in Egypt. When studying the Assuan Dam in Egypt, newspaper clippings about the New Wanaque Dam in the Newark water supply project may suggest that some pupil may be able to see that dam the next time he is out riding in that direction. When one pupil has seen it he may volunteer to construct a representation of it on the sandtable to show the others what it is like and how it works.

EFFECTS OF GLACIATION

Effects of glacial action in New England are emphasized in almost all texts, but few teachers lead the children to see that the stones which they clear from their gardens in the spring time

were brought by the same glacier which affected New England. The accumulation and disapearance of a winter ice sheet may teach a valuable lesson on the formation and disappearance of the ancient sheet. An excellent report of a fifth grade lesson on that subject is given in Reference 4, page 43-48.

HARBORS

Our port development at Newark illustrates very well the type of artificial harbor so common in Europe, c. f. the Tilbury Docks at Gravesend, the basins at Antwerp and Hamburg, etc. The floating landing stage at Liverpool is better understood when children have noticed that at our ferry landings the floats move up and down with the tides. Along our coast we have excellent oportunities for teaching the effects of off-shore islands or projecting arms of the land in protecting inland water from storm waves.

BROTHERHOOD OF MAN

All too often we teach a foreign country as if it were entirely foreign to us. We emphasize too much the differences, and too little the similarities. In teaching Germany, the son of the German baker in your class may take home to his father a list of farm products raised in the vicinity of the school and ask him to check those raised in Germany. He may ask him to compare the summer and winter temperatures with our own. The daughter of your German landlord may ask her father to point out to her some of the houses in your town which look most like those he was used to in his home land. These answers should be compared with statements given in the text, as parents' memories are not always good.

The parents of foreign children will often be glad to come to the school and answer children's questions, if they feel sure they will not be ridiculed. In some New Jersey towns there are large colonies of foreigners living much as they did in Russia, Italy, Poland or Czechoslovakia. If you keep your eyes open you will find Italian back yards supporting goats whose milk is used as in Italy; Greek Catholic churches with domes looking like inverted beets, much like the churches in Russia; Polish bake shops with queer looking loaves of black bread; out-of-door ovens in which Hungarians bake their bread as they did in Hungary; and many

other interesting things. If you get the children at work to find foreigners living here as they did at home, you will find teaching European geography great fun.

When you start comparing other parts of the world with parts of the United States which you have studied as types, or vice versa, you will find that we have an Egypt in the Colorado delta lands, a Finland in the lake district of Minnesota, a Yangtse Delta in our lower Mississippi Valley, an Italy in our California and so on almost indefinitely.

INDUSTRIAL PROCESSES

The industrial museum in the class room is a good thing, but we should be careful to think just what each exhibit means to a child. I have in my class room very pretty bottles of wheat and flour labeled first break, second break, etc. I seldom use them. Down in a cupboard where no one can see it is a sorry looking sheaf of wheat. When each child takes a stalk, knocks the grains out against his desk, collects it in his hand and blows the chaff away he has the essentials for understanding the process of threshing. When he grinds his grain between two stones, and sifts out the bran flakes thru a fine cloth, he knows all about the essential processes of grinding grain that he needs to know. If he could then go to an old fashioned grist mill run by an exposed water wheel he would have all the background for understanding processes of industry that I consider necessary for a child in the elementary school.

Flax can be raised in the school gardens and children can have the experience of pulling it, retting, scrutching and combing it.

Clay for pottery making may be secured from a near by clay bed, washed to free it from sand or gravel, made into small bricks and burned in the kitchen stove. Some excellent suggestions for such work are given in Reference 3.

When it is impossible, or inadvisable because of time consumed, for children to have actual experiences with an industry, the museum specimens and slides or moving picture films are a fairly good substitute. For the use of such visual aids, good suggestions will be found in Reference 8.

TEXT BOOK

Finally I would say, "Do not neglect the text book." It is highly probable that the writer knows more geography than the

class room teacher. It is also possible that he is able to formulate the steps in the solution of a problem as well as the average child or classroom teacher. The makers of text books may possibly know something about children's interests. Many of the newer texts have been, and are being, submitted to laboratory experiment in the class room to see how children react to them. It would be an excellent thing for a child to be able to discover the author's problem and the steps that he has used in the solution of his problem, yet many of them are unable to do it. Pupils should be trained to find on maps, places mentioned when reading any kind of reference material. If they are allowed to follow slovenly habits of study in the elementary school, they will not be likely to acquire careful habits later. The worst thing to do with a text book is to encourage children to memorize it word for word, the next worst thing is to neglect it.

When you have trained children to read to get the thought from the printed page, the text may well be used as a reference book. A good type of question often is: "Use your text as a guide book; consult maps, pictures, reading material, tables of population, etc., and describe what you could see on a trip from Chicago to St. Louis." If the text material on Egypt is organized with reference to the problem: "Of what importance is the control of Egypt to Britain?" the children may be led to raise the problems: "What must Egypt have been like at the time of the Pharaohs?" "What differences would King Tutankhamen find in the Egypt of today?"

Old texts may be cut and pasted together to answer new problems. A student may find all the descriptive and illustrative material relating to the animals of the Amazon basin and cut out and paste pictures and text material together to show which of them live mainly in the trees and which mainly in the water. The cover of the booklet may be decorated with a map of South America with the forested region painted dark green.

Bringing old text books up to date by changing maps, tables of statistics, etc., is a good exercise. Students will often become quite keen as to who will find the greatest amount of obsolete material in an old text.

Almost any exercise that will fix the attention of the child on the meaning of what he is reading is worth while. Many excellent suggestions for teaching children to read geographical material will be found in Reference 7.

Our attitude toward work often helps to determine that of the child. The attitude in the geography class should be:

"The world is so full of a number of things,
I am sure we should all be as happy as kings."

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GEOGRAPHY LESSONS AS FRIENDS FOR LEISURE*

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Americans are acquiring more and more leisure. The United States Bureau of Labor, studying one million workers for 1926, finds that more than 6 per cent of them are working on a flat five-day week for several months in the year. The Saturday half-holiday, the summer vacation, are established as a standard among employees. People now do not expect to work more than eight hours a day, and they expect a fair number of holidays.

With this growing leisure, however, has strangely enough, come a growing prosperity thru the increasing use of power and of ingenious machinery, multiplying force and conserving strength. By efficiency planning, useless motion and waste effort are also eliminated so that during the last ten years the output per man in most industries has increased sixty per cent. Wages have increased and

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since 1920 commodity-prices have fallen. Thus growing leisure has justified itself and the way is open for more leisure.

Yet this new freedom, this leisure, carries a menace, as Guglielmo Ferrero points out in his latest book. A leisure which tends to no mental growth, which makes us no better inside, which leaves us where we were last year, is not a leisure to be imitated. Leisure should be spent not only pleasureably but also profitably, and toward this end of inner resource, of mental equipment, no study can contribute more than geography.

DEVELOP APPRECIATION

Who are the people you find most interesting? In all probability, those who do three things—read intelligently, travel as widely as possible, enjoy the face of nature. These three things are fostered by the *proper* teaching of geography, and I should not consider any geography teacher a true success unless that teacher was developing in her pupils one or all of these aims. That teacher should know that true geography is not limited to a study of location or place nor to a sort of catalog knowledge of products and industries. No, geography is not true geography unless it stimulates to activity, to insight, unless it illuminates and beautifies some of a person's leisure. Can we expect that result from every one in a class? Not at all; but the more students who show that kind of response, the more successful has been their teacher.

Of the three things which I have mentioned as making people interesting to themselves and probably to others, reading is the first. Leisure reading is of various kinds, but most readers will devote their leisure to the newspaper, fiction, or history. How can a person get the best out of a newspaper unless he has some knowledge of geography? The Tacna-Arica controversy, which has lately been attracting much notice; does it mean anything to you unless you have some idea of the position, the importance, the condition of that little portion, with its precious oasis of the long Pacific desert of South America? Of course we can't know everything, and it is no disgrace for the ordinary person to be ignorant of Tacna-Arica geography, but if you come across mention of it, do you want to find out and try to find out? Alaska is our own territory. Do you know why its population has not been increasing? Is there a good chance for a young fellow in Alaska? Would he be likely to settle there permanently? Last week we landed marines

again in Nicaragua. Can you even point out Nicaragua on the map? What sort of country is it? This is geography up-to-date. How many of your students have an appetite for it?

How can you get the best out of fiction without knowing or learning geography? Rex Beach, Jack London, Zane Grey, Stewart Edward White, Joseph Conrad, Rudyard Kipling cannot give their clear message unless I realize the geography involved, the terrene background and stage of these stories. If my teacher will lead me to read understandingly, with willingness for a certain amount of mental effort, my joy in these stories will not be spoiled, it will be enhanced; and the geographic part of their message will "go marching on." (Read description of a journey along the French Riviera from "The Guests of Hercules," by Mr. and Mrs. Williamson.)

How can you understand history without taking into account geographic factors? Otherwise, history becomes merely a chronicle of camps and courts. Underlying the course of all history is nature, with its unrelenting pressure on man, leading him, driving him, molding him. Climate, surface, soil, situation, greater than man's temporary whims and fancies, make history in the larger sense. What is meant by the remark, "Egypt is the gift of the Nile?" Read Brigham's Geographic Influences in American History, Ellen Semple's large volume treating of the world, Ellsworth Huntington's "Climate and Civilization," or James H. Breasted's "The Conquest of Civilization." Give me, if I am one of your pupils, some idea of the forces which lie behind all history.

Is it possible for us to develop in our students that "inward eye which is the bliss of solitude," and which makes all reading so much more enjoyable? Again I say it is possible with some, and that "inward eye" need not remove them from ordinary games and contacts. Taking for granted that you have this taste for discerning geographic background (else of course you cannot impart it), we must proceed by two steps; first, to show our students how enjoyable it is, and second, illustrate, preferably by deeds, not words, how we do it. I cannot go more at length into the method, but if you want to give this "good gift" to those you instruct, it is easy to formulate the method; there is nothing cabaliotic about it.

READING AND TRAVEL

Reading is the background of travel. Those who bring little to travel get little out of it. When you yourself take a new journey, or perhaps an old one, do you ever prepare for it by reading about the features which are worthy of remark or look them up afterward? Do you know any collection of works which will illuminate your travels at home, to say nothing of those which you may take abroad? Works like these are Davis' "Physical Geography," Hobbs' "The Fall of the Earth," Newbigin's popular little books, the Western Routes handbooks of our own government. If you can honestly say "Yes" to any of these queries then geography will be "a lamp unto your feet and a light unto your path." Teach your students to prepare, geographically, for travel; but remember they will not prepare unless they know what to consult.

To each of us, in his leisure hours, the open road, the footpath way, the brookside path, is available, and perhaps more unfrequented since the automobile came. Can geography make our country walks more interesting as a leisure occupation? Again, Yes. Here physiography as a study, hard tho it sounds, is a magic opener of eyes. The difference between South Jersey and our part of Pennsylvania is the difference between Coast Plain and Piedmont, with all which that implies. The various belts of rock which we find, the difference which they make in the streams, the work of the streams themselves, the dikes of intrusive material which may be traced across country, the vegetation which is typical of various situations, all these things give food for thought and investigation.

If you can influence any of the young people you teach to see geographic relations with both outer and inner eye; if you can point out to them the reading which they should do as an introduction to *seeing;* if you show them how you do it; and finally, if you can make them feel the joy which comes when a person can read and understand the face of nature; then you will have put into their hands the key to a treasure that fadeth not away, a resource which is incorruptible and inexhaustible, and enrichment of reading, of travel, in short, of leisure and of life itself. This will take them out of a small world into a great one, and that is the best use of leisure.

STUDY OF ALASKA BY THE PROBLEM METHOD

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The study of Alaska by the method presented here has been used a number of times with excellent results. Other units of work have been developed in a similar manner. The outline and suggestions have grown out of several years of experimenting with the method.

I. Introducing the Problem. (Teacher addressing the class.)

In looking thru magazines I came across a number of articles about Alaska. I was rather surprised at what they say about that country. I am going to read the titles of the articles to you and I want you to listen and tell me what you think of them.

Teacher reads: The Treasure House of Southeast Alaska; The Land That Uncle Sam Bought and Then Forgot; America's Greatest Territorial Possession and Its Opportunities; Alaska, the Misunderstood; Greed Endangers a Great Alaskan Industry; Alaska, A Land of Great Promise; The Value of Alaska; Northward the Course of Empire; A Game Country Without a Rival; Alaska, The Land of the Future.

II. Major Problem. What do you think of these statements? Is "Alaska the Land of the Future"? Does it have great possibilities and will it become densely populated like the United States? (There is always a division of the pupils on this question and they should be allowed to discuss it at some length from their present knowledge. This is what the teacher wants. It is the best type of motivation.) How can we find out the facts? What do we need to know to answer the problem?

III. Minor Problems. (Suggestions from the pupils as far as possible. Take them in whatever form the pupil puts them. Then they are his.)

1. Would farming possibilities in Alaska justify calling Alaska "The Land of the Future?"

   Considerations: (The teacher helping if necessary.)
   Crops grown and possibilities of each; favorable and unfavorable climatic influences; length of growing season; topography; soil areas suitable for agriculture.

2. Is the production of animal products in Alaska promising?
   Considerations: Possibilities for production of sheep, cattle, hogs, reindeer; fur farming.
3. Are there large possiblities of mineral production in Alaska?
   Considerations: Minerals produced; value of mineral products; undeveloped mineral resources; possibilities of undiscovered mineral resources.
4. How large are Alaska's forest resources?
   Considerations: Area forested; kind of trees; size of trees; possible uses; markets.
5. Is Alaska rich in fish?
   Considerations: Kinds of fish caught; value of fisheries; possibilities of extension; seal fisheries.
6. Is good transportation possible so that the wealth of the country can be developed?
   Considerations: Harbors; navigable rivers; influence of ice on navigation; railroads built or building; wagon and automobile roads; influence of topography and climate on transportation.
7. Is Alaska located so that the products can reach good markets?
   Considerations: Possible markets: China and Japan; Western United States; South America; Eastern United States and Europe thru the Panama Canal.

IV. Exercises and Related Problems.

1. Would Unalaska be a good location for a coaling station?
2. Where would you go in Alaska to see the "Midnight Sun?" At what time of year?
3. Why was Alaska once called "Seward's Folley"? Is this applicable today?
4. What troubles have arisen among the nearby nations over the Alaskan seal industry?
5. Will the possible development of air routes across the polar seas give Alaska a greater importance?
6. Is Alaska of importance as a market for United States manufactures?
7. In what way is California interested in the development of the coal fields of Alaska?

8. By what three routes can you reach Fairbanks? What method of transportation would you use in each case?
9. Can you see any advantage in making Juneau the capital instead of Nome or Fairbanks?
10. Which do you think is warmer in summer, Juneau or Fairbanks? In winter? Why?
11. Where do glaciers reach the sea? How might this interfere with navigation.

V. Conclusions or Summary. To be written neatly in a note book.

VI. Topics for oral reports.

1. "The Valley of Ten Thousand Smokes." *National Geographic,* Vol. 35: 359-541
2. "Greed Endangers an Alaskan Industry." *Illustrated World,* December, 1921: 538-541
3. "Reindeer in Alaska." *National Geographic,* Vol. 36: 538-556

Suggestions for Using the Problem Method

1. Introducing the Problem. The purpose of this section is to interest the child in the unit of work to be studied. It is an attempt to motivate the study. If the child is to be interested in anything it must be connected with his experience. A large part of the success of the problem method depends upon how well this step is done. Various devices may be employed to accomplish this result. The approach suggested has been uniformly successful in arousing interest.

2. The teacher must enter enthusiastically into the work. It must be a problem to him as well as to the pupil. The pupil is quick to detect if the teacher is trying to "fake" a problem.

3. Steps I and II and the suggestions under III are the assignment. The teacher may start the pupils to work to find out what they can on the major problem or he may indicate certain of the minor problems to be studied first.

4. Nothing but clear reasoning based upon facts should be accepted by the teacher. One of the chief advantages of this method is to teach the pupil how to attack and solve real problems. The weighing, evaluating, and classifying of material is of prime importance in any child's education. Geography can be taught so as to give this training.

5. The Exercises and Related Problems. These are of two types chiefly. In the first place, certain facts the child should know concerning Alaska are not necessary in the solution of the major problem. They must not be dragged in in solving the major problem but can be given in this section. Secondly, after the study has progressed thru the solution of the major problem the pupil has sufficient basic knowledge to be able to work out problems for himself. Some of the related problems are of this type. The related problems and exercises are suggestive only. The list may be lengthened to whatever extent the teacher's judgment deems desirable.

6. The references are to the textbooks and supplementary readers in general use. The magazine references are valuable and can be extended altho they are not necessary for good work. Valuable material on Alaska can be secured from the various government bureaus at Washington.

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GEOGRAPHICAL PUBLICATIONS

James Fairgrieve and Ernest Young. **Europe and the British Isles.** Human Geography by Grades, Book Six. 476 pages, 220 photos, maps, and sketches. D. Appleton & Co., N. Y., 1927.

In the final volume of this series of Human Geographies by Grades, two relationships are repeated so insistently and made so vivid by excellent sketch maps that they become motifs: the coincidence of man-constructed highways and natural depressions, and the part played by a well defined focus of such natural highways in the development of national unity. Factors that make for vigorous states and those that militate against them are concretely illustrated thru the tracing of the historical geography of the several countries. The authors bring in the physical evolution of a region whenever there are obvious relationships between it and the human development therein. There is variety in the procedure followed in the discussion of the different countries.

The book concludes with an analysis of the composite character of the population of the United States, the contribution made to its civilization by each of the major component nationalities, its geological history, the place it occupies in the temperature, wind, and rainfall systems of the world, its several climates, and its territorial expansion. A brief explanation is given of the concentration of the great powers of the world in the middle latitudes of the northern hemisphere.

Appended to each chapter are questions and exercises. The latter test several skills: construction and interpretation of climatic, production, commercial, and population grafs; making of topographic profiles from contour maps; gathering of climatic data from isothermal, isohyetal, and wind maps; computation of altitude of noon sun; and the drawing of maps.

Tho designed as a reader for the later elementary or junior high school grades, there is much of value in the book for the college student of European geography or history, and much that would bewilder and bore the student for whom intended. Illustrations of road foci are enumerated beyond the ability to maintain interest. There is a multiplicity of names of unfamiliar places. In the absence of a detailed atlas, there would be difficulty in localizing many of the small sketch maps. Among other items that the reviewer would eliminate are the determination of the shape of an area by triangulation; the finding of the position of an area in the world by sun observation, use of chronometer, and tables for the equation of time; and the explanation of the tides.

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